

**Amendments to the Claims:**

The listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Currently amended) A method for controlling outer loop power, comprising the following steps of:

a) measuring a BER, and calculating an error between measured BER and a target BER and ~~a change of the error~~ a variance value of the error;

b) determining a degree grade of the error and a degree grade of the variance value of the error ~~change of the error~~;

c) calculating a degree grade of a SNR threshold adjusting step value in accordance with the degree grade of the error and the degree grade of the variance value of the error;

d) determining an actual SNR threshold adjusting step value based on the calculated degree grade of the SNR threshold adjusting step value; and

e) adjusting a SNR threshold in accordance with the actual SNR threshold adjusting step value.

2. (Currently amended) The method for controlling outer loop power as claimed in claim 1, wherein said step a) is performed as follows:

the error is  $-10$ , when measured BER = 0;

the error is  $\log_{10}(\text{measured BER}/\text{target BER})$ , when measured BER  $\neq 0$ ; and

the ~~change~~ variance value of the error is a current calculated error minus a previous calculated error.

3. (Currently amended) The method for controlling outer loop power as claimed in claim 1, wherein the degree grade of the error and the degree grade of the ~~change~~ variance value of the error in said step b) are determined by a table below:

Degree grade	-3	2	-1	0	1	2	3
Error	<-0.7	[-0.7, -0.3]	[-0.3, -0.05]	[-0.05, 0.05]	[0.05, 0.3]	[0.3,	>0.7

						0.7]	
<u>Change</u> <u>variance</u> <u>value</u> of error	<-0.7	[-0.7, -0.3]	[-0.3, -0.1]	[-0.1, 0.1]	[0.1, 0.3]	[0.3, 0.7]	>0.7

4. (Currently amended) The method for controlling outer loop power as claimed in claim 2, wherein the degree grade of the error and the degree grade of the change variance value of the error in said step b) are determined by a table below:

<u>Degree</u> <u>grade</u>	-3	-2	-1	0	1	2	3
error	<-0.7	[-0.7, -0.3]	[-0.3, -0.05]	[-0.05, 0.05]	[0.05, 0.3]	[0.3; 0.7]	>0.7
<u>change</u> <u>variance</u> <u>value</u> of error	<-0.7	[-0.7, -0.3]	[-0.3, -0.1]	[-0.1, 0.1]	[0.1, 0.3]	[0.3, 0.7]	>0.7

5. (Currently amended) The method for controlling outer loop power as claimed in claim 1, wherein said step c) is performed in accordance with the following equations:

if  $|\text{error degree grade}| < 2$ , SNR threshold adjusting step value degree grade =  $\text{int}(\alpha_1 * \text{error degree grade} + (1 - \alpha_1) * \text{error change variance value degree grade})$ ; and

if  $|\text{error degree grade}| \geq 2$ , SNR threshold adjusting step value degree grade =  $\text{int}(\alpha_2 * \text{error degree grade} + (1 - \alpha_2) * \text{error change variance value degree grade})$ ,

wherein,  $\text{int}(x)$  denotes rounding, and both  $\alpha_1$  and  $\alpha_2$  are adjustable coefficients and meet the following requirement:

$$0 \leq \alpha_1 \leq \alpha_2 \leq 1.$$

6. (Currently amended) The method for controlling outer loop power as claimed in claim 3, wherein said step c) is performed in accordance with the following equations:

if  $|\text{error degreegrade}| < 2$ , SNR threshold adjusting step  $\text{degreegrade} = \text{int}(\alpha_1 * \text{error degreegrade} + (1 - \alpha_1) * \text{error change variance value degreegrade})$ ; and

if  $|\text{error degreegrade}| \geq 2$ , SNR threshold adjusting step  $\text{degreegrade} = \text{int}(\alpha_2 * \text{error degreegrade} + (1 - \alpha_2) * \text{error change variance value degreegrade})$ ,

wherein,  $\text{int}(x)$  denotes rounding, and both  $\alpha_1$  and  $\alpha_2$  are adjustable coefficients and meet the following requirement:

$$0 \leq \alpha_1 \leq \alpha_2 \leq 1.$$

7. (Currently amended) The method for controlling outer loop power as claimed in claim 4, wherein said step c) is performed in accordance with the following equations:

if  $|\text{error degreegrade}| < 2$ , SNR threshold adjusting step  $\text{degreegrade} = \text{int}(\alpha_1 * \text{error degreegrade} + (1 - \alpha_1) * \text{error change variance value degreegrade})$ ; and

if  $|\text{error degreegrade}| \geq 2$ , SNR threshold adjusting step  $\text{degreegrade} = \text{int}(\alpha_2 * \text{error degreegrade} + (1 - \alpha_2) * \text{error change variance value degreegrade})$ ,

wherein,  $\text{int}(x)$  denotes rounding, and both  $\alpha_1$  and  $\alpha_2$  are adjustable coefficients and meet the following requirement:

$$0 \leq \alpha_1 \leq \alpha_2 \leq 1.$$

8. (Original) The method for controlling outer loop power as claimed in claim 5, wherein  $\alpha_1$  is 0.5 and  $\alpha_2$  is 0.7.

9 (Original) The method for controlling outer loop power as claimed in claim 6, wherein  $\alpha_1$  is 0.5 and  $\alpha_2$  is 0.7.

10. (Original) The method for controlling outer loop power as claimed in claim 7, wherein  $\alpha_1$  is 0.5 and  $\alpha_2$  is 0.7.

11. (Currently amended) The method for controlling outer loop power as claimed in claim 1, wherein in step d), the actual SNR adjusting step value threshold is determined according to the degreegrade of SNR threshold adjusting step value as shown in the following table:

<u>degregrade</u> of SNR threshold adjusting step <u>value</u>	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step value	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

12. (Currently amended) The method for controlling outer loop power as claimed in claim 5, wherein in step d), the actual SNR adjusting step threshold is determined according to the degregrade of SNR threshold adjusting step value as shown in the following table:

<u>degregrade</u> of SNR threshold adjusting step <u>value</u>	-3	-2	-1	0	1	2	3
Actual SNR threshold adjusting step <u>value</u>	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

13. The method for controlling outer loop power as claimed in claim 6, wherein in step d), the actual SNR adjusting step value threshold is determined according to the degregrade of SNR threshold adjusting step value as shown in the following table:

<u>degregrade</u> of SNR threshold adjusting step <u>value</u>	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting step <u>value</u>	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

14. (Currently amended) The method for controlling outer loop power as claimed in claim 7, wherein in step d), the actual SNR adjusting step value threshold is determined according to the degregrade of SNR threshold adjusting step value as shown in the following table:

<u>degregrade</u> of SNR threshold adjusting step <u>value</u>	-3	-2	-1	0	1	2	3
actual SNR threshold adjusting	-0.6	-0.3	-0.1	0	0.1	0.3	0.6

step <u>value</u>							
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15. (Currently amended) The method for controlling outer loop power as claimed in claim 1, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step value + previous SNR threshold;

and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

16. (Currently amended) The method for controlling outer loop power as claimed in claim 11, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step value + previous SNR threshold;

and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

17. (Currently amended) The method for controlling outer loop power as claimed in claim 12, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step value + previous SNR threshold;  
and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

18. (Currently amended) The method for controlling outer loop power as claimed in claim 13, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step value + previous SNR threshold;  
and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.

19. (Currently amended) The method for controlling outer loop power as claimed in claim 14, wherein in step e), the SNR threshold is adjusted by the following steps of:

i) calculating a temporary SNR threshold in accordance with the following equation:

temporary SNR threshold = SNR threshold adjusting step value + previous SNR threshold;  
and

ii) determining a SNR threshold according to the temporary SNR threshold calculated in step i):

SNR threshold = predetermined upper limit when temporary SNR threshold > predetermined upper limit;

SNR threshold = predetermined lower limit when temporary SNR threshold < predetermined lower limit; and

else SNR threshold = temporary SNR threshold.